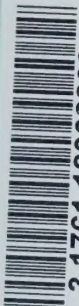


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*Submission of*

**NATIONAL COAL ASSOCIATION**

**Washington, D. C.**

*to the*

**CANADIAN**

**ROYAL COMMISSION ON ENERGY**

**CALGARY, CANADA**

**MAY, 1958**





Submission of  
NATIONAL COAL ASSOCIATION  
Washington, D. C.

to the  
ROYAL COMMISSION ON ENERGY  
Calgary, Alberta, Canada

Participating:

ROBERT E. LEE HALL  
General Counsel  
National Coal Association

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General Counsel  
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Public Utility Consultant

May 7, 1958





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The parties presenting and endorsing this presentation are identified as

NATIONAL COAL ASSOCIATION was incorporated under the laws of the State of Delaware in the year 1917 as a voluntary, non-profit organization formed as a trade association to represent the

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Submission of  
NATIONAL COAL ASSOCIATION  
to the  
ROYAL COMMISSION ON ENERGY

I

INTRODUCTION

My name is ROBERT E. LEE HALL and I am General Counsel of the NATIONAL COAL ASSOCIATION with offices in the Southern Building, Washington 5, D. C. My appearance here today is at the express letter invitation of the Secretary of the Royal Commission on Energy under date of March 18, 1958, as a result of my personal request to be heard on the opening day of these hearings in Calgary on February 3. I appear principally on behalf of the National Coal Association but I have been authorized to state that this submission also has the endorsement of FUELS RESEARCH COUNCIL, INC., ANTHRACITE INSTITUTE, and UNITED MINE WORKERS OF AMERICA. These parties are more fully identified in the next section below. However, before proceeding further, it is my wish to express appreciation to the Commission Chairman, Members, and Staff, for affording the United States coal industry an opportunity to be heard on some of the important matters of mutual interest and concern which, we believe, properly fall within the terms of reference governing the scope of the enquiry of the Borden Commission.

II

IDENTIFICATION OF THE PARTIES

The parties presenting and endorsing this presentation are identified as follows:

NATIONAL COAL ASSOCIATION was incorporated under the laws of the State of Delaware in the year 1917 as a voluntary, non-profit organization formed as a trade association to represent the





bituminous coal mine owners and operators of the United States. The principal offices of the Association are located in the Southern Building, in the City of Washington, D. C. Its membership is comprised of members representing approximately two-thirds of the total commercial bituminous coal production of the United States. Coal produced by those members is sold and marketed in practically all communities in the nation and substantial quantities are marketed in Canada. By reason of continuous representation on behalf of the bituminous coal operators and owners since 1917, it is fair to say that the organization is generally recognized as the official spokesman reflecting the views of the United States coal industry on matters of national significance and importance.

FUELS RESEARCH COUNCIL, INC., is a voluntary, nonprofit organization incorporated under the laws of the State of Delaware in 1947, with its principal offices in the Shoreham Building, Washington, D. C. The purpose of the Council is to represent persons, associations and corporations engaged in the mining, processing, transportation and sale of bituminous coal, coke and anthracite, in research and other matters relating to or bearing upon competitive relationships between coal, coke, anthracite, and other fuels. The corporation presently numbers among its members various groups representative of the bituminous coal and anthracite mine operators as well as railroads hauling bituminous coal, coke and anthracite.

ANTHRACITE INSTITUTE is a voluntary, nonprofit trade association organized under the laws of the Commonwealth of Pennsylvania in 1930. Its principal offices are located in the City of Wilkes-Barre, in the State of Pennsylvania. It represents its members in matters of common interest. Anthracite produced by those members is sold in many communities in the United States and Canada.

UNITED MINE WORKERS OF AMERICA is a voluntary, unincorporated, nonprofit association organized for the protection and welfare of the mine workers belonging to and affiliated with it. Its members number approximately 300,000 persons engaged in the actual mining and production of coal in coal mines located in most of the states of the Union.

By way of further identification of the speaker, it can be pointed out that in addition to my present capacity as the chief legal officer of the National Coal Association, I also am: Secretary of Fuels Research Council, Inc.; General Counsel, Bituminous Coal Institute; and Vice Chairman, Section of Mineral and Natural Resources Law, American Bar Association. I am a member of the Federal Power Commission Bar, and have been admitted to practice before the Bars of the Interstate Commerce Commission, the District Court of the United States for the District of Columbia, the United States Court of Appeals, and the Supreme Court of the United States.





### III

#### PURPOSE OF APPEARANCE

The vital interest of the United States bituminous coal industry in all aspects of natural gas competition is, of course, common knowledge in the States and, perhaps, in Canada as well. Unfortunately, however, the reasons for this necessary interest and concern are neither universally appreciated nor fully understood. The many competitive advantages enjoyed by the natural gas industry are, for the most part, the product of shortsighted legislation enacted (1938) without any serious attempt to consider the prospective impact of this new fuel competitor upon other fuel industries or upon our available fuel resources. By its very nature, natural gas has characteristics which probably require the vestiture of natural gas companies with some monopoly rights and privileges. However, this is not to say that this must be done at the expense of competing fuels and without proper regard for the necessity of preserving the free competitive enterprise system.

Our free enterprise coal industry has suffered enormous losses because of the competitive advantages casually bestowed upon the infant natural gas industry by the Congress in 1938. Your nation now stands at the same threshold of our 1938 lost opportunity. Fortunately, your Government, through the extensive enquiry of the Royal Commission on Energy, is wisely seeking all possible pertinent facts prior to final establishment of a Canadian network of natural gas pipelines for domestic consumption and prior to committing Canadian natural gas reserves to any unwise foreign use. The folly of our extravagant expansion and wasteful use of natural gas is demonstrated in our reserve gas supply situation. The life index of American natural gas reserves has fallen each year for the last twelve years and now stands at only 21.4 years' supply based upon present rates of consumption. This is obviously below a peril point from the overall public interest point of view.





It is our purpose to bring to you today the benefit of the United States coal industry's twenty-year experience under the Natural Gas Act in the belief that the Canadian people can, and will, profit from ours. We respectfully request permission to present a portion of our submission through the medium of two additional witnesses: MR. MELWOOD W. VAN SCOYOC, Public Utility Consultant, with sixteen years' service with the Federal Power Commission; and JEROME J. McGRATH, Esq., with eight years' experience as Trial Counsel for the coal, railroad and labor intervenors in Federal Power Commission proceedings. They will treat with matters peculiarly within their expertise relating to coal's many problems in dealing with gas as a competitive fuel. In the light of their unique record of participation in various phases of our Federal Power Commission proceedings - both inside and out - Borden Commission members or Staff may wish to question them on other matters of interest not herein covered. They will be more fully identified when they testify in these hearings.

#### IV

#### DEFINITION OF INTEREST

We have an immense stake in any policy recommendations which may be made by your Commission whether it affects the disposition of natural gas in Canada or natural gas for export purposes. It is a matter of public record that we have participated in recent Federal Power Commission proceedings as opposition intervenors with respect to the proposed Canadian export of natural gas to Midwestern Gas Transmission Company. The opposition intervenors included National Coal Association, Fuels Research Council, Inc., United Mine Workers of America, Maher Coal Bureau, Anthracite Institute, Chesapeake & Ohio Railway Company, Midwestern Coal Producers Institute, Truax-Traer Coal Company, Baukol-Noonan, Inc., and Dakota Collieries, Inc.





The proceedings have taken up 143 hearing days covered by 21,074 pages of testimony and 789 exhibits. In the light of this formidable record, it will not be our purpose here to retry or argue again the coal case on export! The Federal Power Commission record is available to this Commission -- our only suggestion is that the coal testimony in the Federal Power Commission proceeding will make interesting and useful reading for Commission members and Staff. A number of copies of our Federal Power Commission brief can be made available to your Commission upon request.

Our principal concern here today, therefore, is centered around your prospective policy recommendations in the energy field. What you do may have a profound effect upon our interests across the border - and may vitally affect our substantial interests in Canada.

Canada and the bituminous coal industry of the United States have long had a mutually profitable relationship. When Nature laid down the coal reserves of the two countries, she was far more generous with the United States than with her northern neighbor. Canada's mineable coal reserves have been estimated at slightly more than 107 billion tons, according to the 1946 estimate of the Canadian Geological Survey. The United States has almost 1.9 trillion tons left in the ground, or 90 per cent of the coal in North America. Canada's reserves are 4.7 per cent of the continent's total.

The vast distance which Canadian coal must travel from mine to market has made it far more economical for Canadian industry, concentrated largely in the Toronto-Montreal-Ottawa triangle, to rely on high-quality coal from the United States. Rich beds of bituminous coal in the United States lie hardly 500 miles to the south and southwest of the heart of Canada's industry, and the Great Lakes supply a convenient highway far superior to the 2,000-mile rail haul from Canadian mines.





As a consequence of these hard facts of geology, Canada uses more coal from the United States than from her own sources. A thriving and generally expanding trade has arisen because Canadian consumers found it to their own best interests to import coal from the United States. Thousands of persons on both sides of the border have come to depend on this trade for their livelihood. They include not only United States miners and railroad men, but the crews of Lake vessels, many of them Canadians, and the persons employed in Canadian commercial coal dock operations. So also with Canadian railroad men and truckers who distribute this coal north of the border.

In the last 27 years, for example, Canada has imported almost 460 million tons of bituminous coal from the United States. This traffic has varied from a postwar low of about 8.5 million tons during the early 1930's to a high of more than 24.3 million tons in 1944. It reached a postwar low of 15.9 million tons in 1954 but rebounded to 20.6 million tons in 1956 and 18.4 million last year.

Therefore, the advent of natural gas into coal's traditional markets in Canada should cause deep concern to thousands who see their employment and their future threatened.

Canadians have purchased coal from the United States out of hard economic sense. They needed a reliable, dependable, economic fuel. United States coal met this need and continues to meet it. It has powered Canadian industry and warmed Canadian homes through generations of Canadian progress. This need is not over. Canada will continue to need coal - need it far more than, in her present preoccupation with the possibilities of natural gas, she may now realize.

Canadian steel requires coal, and your rising industrial nation will require increasing amounts of steel. Other industrial plants by the thousands will



likely find, as their counterparts in the United States have found, that natural gas becomes increasingly expensive as the first cheap supplies are burned up and the cost of opening new reserves mounts steadily.

The Gordon Commission's final report predicts this development. It says that while coal's markets in Canada are not likely to expand in the immediate future, a gap in the energy supply will open in the future as supplies of oil and gas disappear. Coal will again be expected to fill this gap.

But meanwhile what happens to the complex Canadian-American apparatus for producing, transporting and distributing United States coal in Canada? This many-faceted business, and the thousands of persons dependent on it, cannot be held intact on a stand-by basis. Coal in all its aspects is a volume business. A mine cannot be turned on and off like a gas valve. Shut down a mine and it floods, its machinery rusts, its skilled workers scatter beyond recall. It is difficult and expensive - if not impossible - to bring it into production again. Wishing or need alone will not make it otherwise.

It would be exceedingly impractical, if not impossible, to mothball the Lake freighter fleet and the rail cars which move coal to Canadian markets. The Lake coal docks cannot survive without a reasonable volume of business. They cannot be closed down and reopened at will.

And what if there should be another international war emergency when coal would be called on, as it has been in the past, to expand its production while other fuels are diverted from normal domestic uses? Canadians must surely recall that in the past two World Wars the bituminous coal and anthracite industries did not cut off Canadian outlets even though there was heavy pressure to do so in order to fill the enormous energy gap in the United States due to the inadequacy of other fuels in the face of wartime emergency demand. The continued health and welfare - the essential vitality - of the United States coal





industry is a matter of utmost importance to both your nation and ours. Any steps affecting the present balance should be weighed carefully before legislating in the natural resource field.

As representatives of United States coal interests, we are naturally concerned by the threatened loss of important markets in Canada but we do not appear before this Commission to argue that it has a duty, as such, to prevent threatened injury to the coal producers of the United States. We do believe, however, that it is in Canada's own self-interest to preserve a continued, dependable, reliable source of coal from the nearest and most economical location - the United States. Moreover, we believe that avoidance of some of the mistakes we have observed in the operation of our Natural Gas Act can serve to guide your Commission in the formulation of the recommendations it must make in the energy field.

To this end, we have gratefully accepted the invitation extended across the border and are presenting this submission today.

V

VAN SCOYOC PRESENTATION

MR. MELWOOD W. VAN SCOYOC, of Washington, D. C. , will submit for your consideration a resume of the duties and activities of the Federal Power Commission pertaining to the regulation of the natural gas industry in the United States, and give us his views concerning the efficacy of that regulation. Mr. Van Scoyoc's qualifications for this assignment are as follows:

Mr. Van Scoyoc is a consultant in the field of Public Utility Regulation. Prior to entering private practice in July of 1954, Mr. Van Scoyoc was, for a period of approximately sixteen years, a member of the staff of the Federal Power Commission, including three years of military leave during World War II. In the last nine years of his period of employment by the Commission, he was Assistant Chief of its Bureau of Accounts, Finance and Rates. This is the Bureau which, during that period of time, had major responsibility other than legal for all matters dealing with the regulation of natural gas companies.





Before employment by the Federal Power Commission, Mr. Van Scoyoc was for approximately ten years on the staff of the Public Utilities Commission of Oregon, which is charged with the regulation of public utilities in that state. This employment covered two periods of service, there being interposed employment for one year by an electric utility in Oregon. He is a graduate engineer, having received a degree in 1927 from Oregon State College. The bulk of his consulting practice involves the representation of state regulatory commissions, other state agencies, municipalities, and distribution utilities in rate proceedings before the Federal Power Commission. He also appears in proceedings before state regulatory commissions in behalf of municipalities, other public agencies and industrial customers.

(BY MR. VAN SCOYOC)

This Commission has already received considerable information relating to the policies and procedures of the Federal Power Commission during the course of these hearings. However, it is my understanding that your Commission is, nevertheless, interested in having a general review of Federal Power Commission activities covering experience with respect to the administration of the Natural Gas Act, and the growth of the natural gas industry under regulation. Therefore, I have attempted to summarize herein my observations on these subjects and I invite questions or interruptions for the purpose of expanding upon any points of particular interest to the Commission.

## VI

### ADMINISTRATION OF THE NATURAL GAS ACT

#### 1. Rate Regulation

Immediately after the Natural Gas Act became law in June of 1938, the Federal Power Commission, in response to complaints of municipalities and state regulatory commissions, and on its own motion, instituted investigations of the rates of many of the natural gas pipeline companies subject to its jurisdiction. In the course of these rate investigations, it concluded that the most fair and equitable basis of rate regulation could be accomplished through the use of what was known as the prudent investment or cost-rate base method of rate regulation as contrasted with the indicated constitutional requirement at that time of the "fair



value'' method. The use of a cost rate base was held to be constitutional by the United States Supreme Court. Ever since the Supreme Court held that it was not incumbent upon the Commission to receive evidence of reproduction cost or fair value, such evidence has been excluded when offered. The situation is now such that no natural gas company attempts to claim other than a cost rate base.

Under the cost method of regulation, the Commission determines the annual cost of service based upon the use of a representative test period. Included in the annual cost of service is the cost of gas purchased from other producers or pipeline companies; operating and maintenance expenses, administrative and general expenses; annual depreciation, taxes, including income taxes and a fair return on the rate base. The rate base is computed by taking the original cost of constructing the facilities, deducting therefrom the accrued depreciation and depletion, and adding an allowance for working capital.

It is the general rule to include in the cost of service all actually experienced costs which have been properly accounted for under the Commission's Uniform System of Accounts. There have been a few instances where expenditures have been excluded where they were not supported by the natural gas company or where the Commission found they were not properly includable within the test period. Costs which arise by reason of transactions between affiliates are scrutinized. It has been the policy of the Commission to exclude from the cost of service any items of expenditure arising from affiliated company transactions which are in excess of the cost to the affiliate, including a fair return on the capital employed.

The amount of working capital allowed by the Commission to be included in the rate base is based upon a formula, which evolved from detailed studies made in the early years of the Commission's regulatory experience. The





allowance consists of the average amount of materials and supplies on hand and average cash working capital equivalent to forty-five days of operating expenses, average amounts for prepaid expenses and less a deduction for cash available to the natural gas company from accruals of Federal income taxes.

In determining the fair rate of return, the Commission considers a wide range of evidence dealing with interest rates of debt securities and the costs of other kinds of capital. The Commission uses what is generally termed the "cost of capital approach" in reaching a decision as to the fair rate of return, that is, the rate of return is based upon the actual cost of debt and preferred stock capital to the natural gas company plus an estimate of the cost of its equity capital.

From 1940 until about 1946, the Commission found six and one-half per cent a fair rate of return for natural gas companies. This return was subsequently reduced to six per cent and, in one case, went as low as five and one-half per cent. For the past several years the Commission's rate of return allowance has been six per cent, although in the case of two companies whose capital structures included relative large portions of equity capital, the Commission has allowed a rate of return of six and one-quarter per cent. Because of the high leverage available for equity capital in pipeline company capital structures, an over-all rate of return of six per cent usually results in a return for equity of from nine to twelve per cent. Although most of the natural gas pipeline companies claim that a six per cent rate of return is inadequate, nevertheless such companies have been able to attract several billion dollars of new capital in the past ten years based on the earnings provided by such rate of return.

Probably one of the most controversial issues with which the Commission





must deal in rate proceedings is the allocation of the over-all cost of service between customers or classes of customers. Inasmuch as most pipeline companies make some sales for consumption or intrastate sales for resale, a cost allocation is required in virtually every rate proceeding to ascertain the cost applicable to the jurisdictional business. In addition to its use for segregating costs between the non-jurisdictional and jurisdictional business, it is also used to allocate the costs between the various classes of jurisdictional customers. Thus it forms a basis for the design of the rates which are charged by pipeline companies.

The Commission has evolved a cost allocation procedure which is with virtually no exception used to serve both purposes. The allocation method has had judicial sanction and has withstood numerous assaults by the natural gas companies in Commission rate cases. Under the Commission's method the fixed costs or constant costs, that is, the return on investment, taxes, annual depreciation and a part of the pipeline operating expenses, as well as the demand charge on gas purchased from other pipeline companies, are first divided into two equal portions. One portion or 50 per cent of the total is allocated among customers or classes of customers on the basis of their use of the capacity of the pipeline at the time of the system peak, usually a three-day sustained peak. The other half of the fixed cost is added to the variable cost and the total thereof is allocated to customers or classes of customers on the basis of their annual use of gas. Variable costs consist of the commodity cost of gas purchased, the cost of production and gathering, and a portion of the transmission system operating cost -- mostly compressor station fuel and maintenance.

There is a third class of costs which are also allocated known as "customer costs." These items consist of the costs incident to metering, customer



accounting and collecting, and sales promotion. Generally these costs are classified one-half to the demand function and one-half to the commodity function. However, they are sometimes allocated in part on the basis of the number of customers.

Under the Commission's method all customers share in at least one-half of the constant costs regardless of whether such customers take gas during the system peak period or not. Those customers which take gas during the system peak period, whether they be classified as firm or interruptible customers, bear a share of one-half of the constant costs. Thus, the interruptible industrial customers, both those supplied directly by pipeline companies and those supplied through sales to distributors of gas on an interruptible basis for industrial purposes, carry some of the constant costs and overheads of the pipeline system.

As previously mentioned, the costs classified to the demand function, that is, the one-half of the constant costs, are allocated to customer classes on the basis of their respective peak responsibilities whereas the commodity costs, which include one-half of the constant costs plus all of the variable costs, are allocated to customer classes on the basis of their annual volumetric requirements. The peak responsibility of each class of customers is determined by ascertaining their peak requirements during the three-day maximum sustained peak of the pipeline system. The peak responsibility is a controversial issue in some cases as some companies prefer to use a single-day peak rather than a three-day sustained peak. Others prefer to use the maximum demand of the firm customers as a basis for determining the total peak rather than the maximum system peak.

## 2. Below Cost Sales of Natural Gas

The pipeline companies desire to have more of the costs classified as





constant costs since that process results in lesser costs being assigned to their non-jurisdictional business. To put it more simply, the assignment of a larger share of the costs to the demand function reduces the costs applicable to the interruptible industrial customers who are curtailed or interrupted entirely at the time of maximum system peak.

Because of the increasing cost of gas in the field, which has resulted in an increasing ratio of variable costs to the total cost of service, the pipeline companies have attempted through one or more devices to transfer more of the commodity cost to the demand component so as to lessen the impact on the commodity rate.

I have been discussing the over-all, system-wide cost allocation procedure of the Commission. As most of the long line transmission companies have what are known as rate zones with different rates in each of the zones, it has been necessary in some cases to make what are known as zone cost allocations. The rate zones generally start at the supply end of the line and continue to the terminal market end of the line. Most of the zone boundaries coincide with state lines or are placed at the inlet side of the compressor stations. However, there is no particular fixed pattern in this respect. As a matter of fact, most of the zone boundaries were established arbitrarily and have been maintained through the years because of historical precedent.

The Commission does not have a single definite formula for use in allocating costs to the various rate zones. However, it has indicated its acceptance of the so-called demand-mile, commodity-mile method. This method involves weighting the demand and commodity costs applicable to each zone by the mileages between such zones and the source of supply.

In the design of appropriate rates for pipeline companies, the most important factor is, of course, the recovery of the cost of service applicable





to the jurisdictional business of the pipeline company. Although companies have strongly contended that the design of rates was the particular province of management not to be interfered with by regulation, the Commission has rejected that argument. It has held that it must make certain that the rates conform to sound rate-making principles. The Commission has prescribed in numerous instances the form of rate and many of the terms and conditions under which natural gas is sold for resale in interstate commerce.

When the natural gas companies first came under the Commission's jurisdiction, all of their rates were individual contract rates with their customers. In 1948 the Commission was successful in converting the contract rates to uniform tariff rates, thereby greatly reducing the number of rate schedules on file and making the rates more understandable, definite and certain.

Generally speaking, the respective demand and commodity costs resulting from the allocation procedures which I have described are used as the basis for computing the two-part demand and commodity rates. However, in recent years there has been a marked effort on the part of some natural gas companies to depart from these allocated costs and to increase the demand rate above allocated costs and thus decrease the commodity rate below allocated costs. The reason given for so doing is that the price of gas has been increasing in comparison with the prices of other fuels, thus narrowing or obliterating the price advantage which the natural gas industry has enjoyed over other fuels in many sections of the country during the past decade. This argument is supported by the claim that the natural gas industry needs to make interruptible sales for industrial use in order to secure a high load factor operation, which in turn will result in a lower cost of service, particularly to the domestic and commercial consumers.

While it is a well recognized fact that high load factor operation results



in a lower over-all unit cost of operation, it does not necessarily follow that high load factor operation achieved through large scale interruptible sales of gas is in the best interests of the ultimate consumer -- that is, the residential and commercial consumer. This is particularly true when it is necessary to artificially depress the commodity rate and increase the demand rate so as to secure that type of business. Moreover, the beneficial effect of high load factor operation is minimal in the upper ranges of system load factors. On the other hand, the low load factor customer, which is primarily the residential heating customer, is penalized by an increase in the demand rate. Such penalty may exceed any benefits derived from high load factor operation of the pipeline through interruptible sales. A number of companies have developed underground storage reservoirs near their market areas which makes unnecessary large scale sales of gas for boiler fuel purposes.

### 3. Certificates of Convenience and Necessity

In determining whether a particular application meets the test of present or future public convenience and necessity with respect to the construction, operation, extension, or acquisition of facilities to serve new or existing markets, the Commission has applied certain standards and tests. Briefly, they include an inquiry into and consideration of the facts and circumstances as to (1) whether the gas supply is adequate for the service proposed to be rendered, (2) whether the facilities are properly designed for the proposed service, (3) whether the estimated construction and operating costs are reasonable, (4) whether the proposed plan of financing is sound, (5) whether the market demand for the proposed service is available at the rates proposed to be charged, and (6) whether the project is economically and financially feasible; that is, whether the estimated revenues from the project will provide for the recovery of the costs of operation, depreciation, taxes, and a fair return.





It has been the general practice of the Commission in certificating new pipeline ventures to require the applicant to have an initial reserve of gas under contract, or held under leases, sufficient to meet the customers' peak day and annual requirements for a period of approximately twenty years. For existing pipeline companies with a record of experience in acquiring gas reserves and of meeting the requirements of their customers, a volume of reserves sufficient for periods of fourteen to eighteen years have been found by the Commission to be adequate. For a major expansion of an existing pipeline system or for a new pipeline venture, the applicant is required to submit a complete gas reserve study. The Commission's staff of geologists and reservoir engineers review the applicants' estimates and on occasion submit their independent estimates of available gas reserves and the ability of the wells to deliver the required volumes of gas.

The Commission's rules provide for the filing of voluminous data in support of a major certificate application. The rules also provide for what is known as abbreviated applications where the proposal of the applicant does not require all the data specified for a major application. The Commission's rules also provide for what is known as a shortened procedure type of hearing where there is no opposition to the proposed project. In such instances a brief hearing is held before a Presiding Examiner, the Commission's Staff Counsel being the only person appearing and making the necessary recitals for the record. Inasmuch as the Commission is required to hold a hearing on each application, this procedure was devised to expedite the processing of uncontested applications.

The Natural Gas Act provides that a certificate may be issued to a new company to serve an area already being served by another natural gas company. Occasionally the Federal Power Commission has looked with favor



upon the presence of competition between two pipeline systems to serve the same market area and has found that the market was adequate to support both the existing and new supplier. Where this competitive situation is present, certificate proceedings are usually lengthy and are of a decidedly adversary nature.

Interventions in certificate proceedings are generally made by customers of the natural gas pipeline company, prospective customers, interested state and municipal agencies, and competing fuel interests. The Staff of the Commission actively participates in these proceedings.

In many instances the Commission attaches conditions to its grant of a certificate to the pipeline company. These conditions fix the time when construction of the project shall commence and be concluded and may also deal with rates, the securities to be issued, and other matters which the Commission feels are necessary to protect the public interest.

While the Commission does not have rate regulatory jurisdiction with respect to sales by pipeline companies to direct industrial customers, nevertheless it has and exercises the authority to authorize or deny such direct sales under its power to issue Certificates of Public Convenience and Necessity.

#### 4. Importation and Exportation of Natural Gas

Applications to export or import natural gas are generally intertwined with applications under Section 7(c) of the Natural Gas Act to construct and operate facilities. There is also involved compliance with Executive Order No. 10485 dealing with border facilities and connections. Thus, the aspects of importation and exportation generally receive considerable Commission attention. While the Commission attempted a number of years ago to apply the same standards of public convenience and necessity to export and import applications as it does to Certificate applications, the courts held that the standards under Section 7(c) do not apply as such.





VII

GROWTH OF THE NATURAL GAS INDUSTRY  
UNDER REGULATION

At the time the Natural Gas Act was enacted in 1938, the interstate transmission of natural gas was virtually in its infancy. Although several long distance gas pipelines had been placed in operation in the late 1920's, no large scale expansion occurred during the depression years. From 1938 until the end of World War II only a very moderate expansion of the pipeline industry took place. But ever since, we have witnessed a phenomenal growth. As of this time every state in the United States, with the single exception of Vermont, is receiving some natural gas service. More than eighty-five per cent of the natural gas sold to domestic, commercial and industrial customers in the United States is hauled through the interstate lines and sold to distribution utilities at rates subject to regulation under the Natural Gas Act.

At the outset of the Commission's regulatory experience, it took forthright action to carry out the intended purpose of the Act. As previously mentioned the Commission commenced a number of rate investigations. During the period extending from 1940 through 1952 it secured a number of very substantial reductions in resale rates. In this process the Commission established new regulatory law through overcoming the handicap of the fair value Constitutional requirement. Rate making was greatly simplified. At the same time investors were assured of a fair return upon the capital actually invested in the pipelines.

Commencing in 1949, natural gas companies began to file applications with the Federal Power Commission for increases in their rates. Three major causes accounted for these increases: First, the increased costs of labor, material and taxes stemming from the inflationary trends, which affected all prices; second, the increased costs which occurred by reason of adding system



capacity at a higher unit cost than that experienced for the existing capacity; and third, increased costs due to the higher prices paid for the purchase of natural gas in the producing fields from non-pipeline producers. Of these three factors, the greatest impact was the higher cost of purchased gas. For example, in 1946 seventeen of the major natural gas pipeline companies paid on the average 4.4¢ per Mcf in the field. These companies are now paying on the average more than 10¢ per Mcf, and some companies are in the 14¢-16¢ range. New contracts in some of the producing areas range from 20-25¢ per Mcf.

As of this time more than a half billion dollars of rate increases have been filed by pipeline companies. Not all of these increases have been granted in full. Approximately \$200 million of increases are pending. Some companies during the period of six years from 1952 through 1957 have filed as many as seven successive rate increases.

These increases in pipeline rates brought about retail rate increases in many sections of the country. The average revenue received by utilities from sales of natural gas per thousand cubic feet in 1956 for the entire United States was approximately 49.2¢ per Mcf as compared with the average revenue in the 1946-1950 period of 33.8¢. While all of this increase is not attributable to pipeline rate increases, nevertheless such increases have, in my opinion, contributed materially to the increases in retail natural gas rates.

Increases in retail rates have not been confined to the non-producing states. The producing states have also experienced such increases. For example, during this same period increases have run from 23 per cent in Texas to a 42-1/2 per cent increase in Oklahoma and a 49 per cent increase in Arkansas.

The growth in the natural gas pipeline industry as well as the distribution





and sale of natural gas to ultimate consumers has been tremendous. In the fourteen year period, 1932-1946, sales of natural gas by utilities rose from approximately 762 billion cubic feet to approximately 2.13 trillion cubic feet, an increase of approximately 180 per cent. In 1957, utility sales of natural gas amounted to approximately 6.7 trillion cubic feet, or an increase of approximately 215 per cent in ten years.

Sales by most of the natural gas transmission companies have greatly increased under regulation. For example, Panhandle Eastern Pipeline Company increased its sales from approximately 70 billion cubic feet in 1942 to approximately 412 billion cubic feet in 1957. El Paso Natural Gas Company had sales of approximately 45 billion cubic feet in 1942. Its sales in 1957 were slightly more than 1 trillion cubic feet, including sales by its subsidiary, Pacific Northwest Pipeline Corporation. Northern Natural Gas Company is another company which has had a phenomenal growth. Its sales in 1942 amounted to approximately 66 billion cubic feet and in 1957 to approximately 390 billion cubic feet.

Since the advent of Federal regulation there has been a large number of new pipeline ventures certificated by the Commission. Probably the most spectacular growth has been that of Tennessee Gas Transmission Company, which went into operation in 1944. In 1945, which was its first full year of operation, Tennessee's sales and transportation of gas amounted to approximately 73-1/2 billion cubic feet. In 1957 sales and transportation volume had increased to approximately 674 billion cubic feet. Texas Eastern Transmission Corporation went into operation in 1947. In 1948, its first full year of operation, it had sales of approximately 118 billion cubic feet. In 1957 its sales had increased to some 558 billion cubic feet. Transcontinental Gas Pipe Line Corporation went into operation in 1951 and its sales in 1952 were



approximately 191-1/2 billion cubic feet. In 1957 they were approximately 283 billion cubic feet. It is now asking the Commission to authorize another major expansion of its pipeline system.

The rapid and spectacular growth of the natural gas industry to the status of the sixth largest industry in the United States has created many problems for all branches of the industry, the Federal Power Commission, state regulatory agencies, the coal industry, and many other segments of our economy including the ultimate consumer. Some very serious problems remain to be solved before all elements of the consuming public receive the protection they deserve.

(BY MR. HALL)

Under date of March 20, 1958, the Royal Commission on Energy transmitted to our group a letter wherein it was indicated that the Commission would be interested in our views on the relationship of conservation to the practice of allowing natural gas "to be sold on an interruptible and/or 'dump' basis in industry." The letter pointed out that this matter has been the subject of Federal Power Commission consideration in administering the Natural Gas Act since 1938. The letter concluded by indicating that the Royal Commission hearings had not thus far produced testimony on this important subject matter. Accordingly, we have undertaken herein to present for Commission consideration information reflecting the experience of the United States coal industry with the problems posed by the sale of natural gas on an "interruptible" or "dump" basis in industry and the inverse relationship of this practice to sound principles of conservation and the necessary maintenance of a balanced fuel economy in the United States.

This phase of our submission will be presented by JEROME J. McGRATH, Esq., who has had wide experience as an active participant in the trial of





Federal Power Commission cases on behalf of coal, railroad, and labor intervenors. Mr. McGrath will present our views with respect to important questions bearing upon conservation and industrial dump sales. The qualifications of Mr. McGrath for this assignment are set forth herein below:

Jerome J. McGrath is a partner in the firm of McGrath and McGrath, Attorneys at Law, 520 Shoreham Building, Washington, D. C., and is also General Counsel of Fuels Research Council, Inc. Mr. McGrath is a 1947 graduate of Georgetown University College of Arts and Sciences with a Bachelor of Science degree. He received his legal education at Georgetown University School of Law with an LLB in 1950.

Since 1951 Mr. McGrath has been almost continuously engaged in the active trial of, and participation in, natural gas matters before the Federal Power Commission of the United States, representing competitive fuel and transportation interests, principally the National Coal Association, the United Mine Workers of America, Fuels Research Council, Inc., the Anthracite Institute and various coal carrying railroads.

Mr. McGrath is a member of the Federal Power Bar Association and is a member of its Executive Committee. He belongs to the American Bar Association and is admitted to practice before the United States Court of Appeals for the District of Columbia Circuit and the United States District Court for the District of Columbia. He is the author of an article entitled "Federal Regulation of Producers in Relation to Conservation of Natural Gas" which appeared in the June 1956 Georgetown Law Journal.

(BY MR. McGRATH)

## VIII

### CONSERVATION

Conservation as we use the term is intended to cover the economic aspects of that problem and, more particularly, the concept of inferior vs. superior uses of this limited natural resource in relation to Federal Power Commission control and regulation.

The use of natural gas as boiler fuel in large quantities and under most circumstances is generally recognized as an inferior use to be avoided except in instances where the public interest clearly requires its expenditure. The



Federal Power Commission has expressed this view from time to time but has not established a definite policy on the conservation of natural gas by specific regulation of its end use. Most observers agree that the Federal Power Commission would prefer to have a specific legislative mandate conferring upon it the authority to exercise sound principles of conservation in the administration of the Natural Gas Act -- but the statute now stands mute with respect to this important public obligation. It is certain that the absence of statutory language in the field of conservation accounts for a large measure of the hesitancy of the Commission to accept the challenge of this public obligation. However, it has not been entirely silent on this subject.

In the Matter of Mississippi River Fuel Corporation, Docket No. G-1995, the Commission said:

"We have repeatedly held that the use of natural gas as boiler fuel is an inferior usage and that, while it is not to be denied in all situations, it should be permitted only on a positive showing that it is required by public convenience and necessity."

And as long ago as 1940 the Commission's 20th Annual Report to Congress stated:

"General use of natural gas under boilers for the production of steam is, however, under most circumstances, of very questionable social economy." (Page 79)

The instances wherein the Commission has followed a conservation policy have been rare indeed. In 1948, for instance, it issued a certificate to Transcontinental Gas Pipe Line Company, Inc., to transport gas from Texas and Louisiana for resale in the Middle Atlantic States. In that case it noted that large amounts of natural gas were proposed to be sold on an interruptible basis for underfiring boilers in electric power plants. Accordingly, it required Transcontinental to study the feasibility of underground storage as a means of eliminating the interruptible boiler fuel deliveries. Since that time, by a series





of expansions, all authorized by the Commission, Transcontinental's boiler fuel sales have increased alarmingly and to date it has no storage project of its own in operation, and only recently filed an application for a certificate requesting authorization to provide storage service.

History amply demonstrates the fact that the Commission has given only lip service to the theory of conservation by controlling the end use of natural gas. In actuality it has permitted such sales to grow and expand in astonishing proportions. The records of the Commission show that whereas in 1948 478,097,000 Mcf of gas were used in electric utilities, in 1957 1,239,310,686 Mcf were used, an increase of 159 per cent. This short-sighted, spendthrift policy of the Commission has been a principal contributing factor not only to the rapid depletion of the reserves of natural gas in the United States, but also has accentuated the demand for gas in the field with the resultant rise in the cost of gas. It is axiomatic that the pressure of rising gas demand upon the supplies available can and does push the price up.

If we were to take only the boiler fuel gas used in electric utilities in the U. S. in 1957 and relate it to the estimate submitted to you by the Petroleum and Natural Gas Conservation Board of Alberta reflecting proven and probable gas reserves of 21 trillion cubic feet, it can be seen for this single use alone Alberta's reserves would last less than seventeen years. Using British American Oil Company Limited's estimates of producible reserves in Western Canada of 28.591 trillion cubic feet, they would last only 23.1 years. The utility figures used above do not reflect gas used for boiler fuel in other industrial establishments. The market estimates in the Midwestern case, for example, indicate that in the first year 75 per cent of the total sales by distributors are on an interruptible or overrun basis. One distributor alone, Iron Ranges Natural Gas Company, whose supply would be strictly Canadian gas, would



have industrial sales amounting to 96.7 per cent of its first year sales, reducing to 87.2 per cent in the fifth year.

The producing States have taken great strides in reducing the physical waste of gas, but little or nothing has been done to eliminate economic waste. Most producing States presently control the production of gas by imposing certain requirements on producers, such as pooling, unitizing, ratable taking, allowables, well-spacing, elimination of flaring and minimum price fixing in areas of production. But in none of these production regulations is there any concern for the end use of gas. In speaking of waste, producing States generally refer to prevention of physical waste of natural gas which might otherwise be sold at a profit, without regard to the economic waste of a commodity used to undersell a competitive fuel.

In the famous Phillips decision of the U. S. Supreme Court, which has been mentioned to you before with varying degrees of reverence or aversion by others in these proceedings, the Supreme Court ruled that the Federal Power Commission had control over the producers who sold their gas in interstate commerce. Some producers to avoid regulation have removed their product from the market, others have sold only within the State of production and others have entered into contracts directly with the consumer thus removing the sale from Commission jurisdiction.

This latter approach is of fairly recent origin. However, already several applications for facilities to transport the gas for the utilities have been presented to the Commission for its approval. Some of these applications are still pending, but in at least one instance the Commission has approved the construction of facilities to transport gas purchased in Texas to be used in electric generating facilities in Florida. But more important, it appears to be a growing trend in the United States. So here we find the producing States not





concerning themselves with what the gas will be used for; the producer and the consumer circumventing regulations; and, the Federal Power Commission, in at least one instance so far, permitting facilities to be constructed which would be used to transport gas to be fired under boilers.

It is not our intention here to imply that the use of natural gas in large steam generating boilers is the only inferior or "low value" use to which natural gas is presently being put, but it is, quantitatively, the largest single, economically wasteful use now prevalent. The utilization of natural gas under boilers of electric generating stations is the use for which we presently have the most accurate information statistically, and is the "inferior" use to which the attention of the Federal Power Commission has most frequently been directed over the years that the Commission has been administering the Natural Gas Act.

## IX

### INTERRUPTIBLE DUMP SALES

The coal interests for many years have actively participated in proceedings before the Federal Power Commission in attempts to dissuade the Commission from permitting boiler fuel sales where coal is readily available and at reasonable cost. For the most part, natural gas sales for this lower form of use are made on an interruptible or dump basis. This is brought about by the attachment of a high space heating load, which is a low load factor use, thus creating deep valleys of off-peak gas available on an interruptible basis. We have urged the Commission to take positive steps to diminish the off-peak dumping of natural gas, but to little avail. This could be accomplished in at least three ways: (1) Placing a volumetric limitation on the annual amounts of gas sold to the distributing companies, thereby restricting the amounts available for off-peak dumping; (2) requiring the distributing companies as well as the pipe



line companies to make maximum use of storage facilities available and encouraging the development of new storage fields; and (3) discouraging dump sales at below cost by regulating rates in such a manner as to effect a minimal use of gas for boiler fuel purposes.

As Mr. Van Scoyoc has pointed out, it is not imperative that distributors or pipelines operate on a 100 per cent load factor basis. Consequently, if the boiler fuel use of gas were curtailed by reduction of load factors to in the neighborhood of 60 per cent to 70 per cent, the remaining reserves of natural gas could be preserved for higher purpose uses. This type of operation may increase slightly the cost of gas to the ultimate consumer, but the increase, in most instances, would be so small when compared to the over-all, long-run benefits to be derived by extending the life of gas supply, that it becomes insignificant.

The potentialities of storage operations in the United States have not been adequately explored. However, nearly everyone recognizes the merits of this type of operation. Storage evens out the swings by transmitting gas from the source of supply into storage during off-peak periods and subsequent withdrawal to meet peak requirements. As a consequence, less transmission capacity is required thus reducing the cost of transmission facilities required to meet peak demands and, in addition, minimizing the off-peak capacity available for dump sales.

The Federal Power Commission has encouraged the development of storage and some of the transmission and distribution companies have or are attempting to develop storage fields, but the lack of a firm policy on the part of the Commission in this regard definitely has retarded its proper growth and expansion.

As pointed out hereinbefore, the Federal Power Commission has a limited jurisdiction over rates as a method of conserving natural gas for superior uses.



Simply stated, there is no rate regulation dealing with the conservation aspect. This has enabled producers and pipelines to dump natural gas into power plants and other inferior uses at a price just below the competitive price of coal and other fuels merely for the sake of capturing that market, without regard to the real or social costs. By social costs we mean the use of natural gas in displacing another more abundant fuel in plentiful supply and creating hardships in an industry already supplying the market, while at the same time rapidly depleting the limited natural gas reserves. Social costs take into account not the short-range disposal of natural gas, but, rather, the long-range conservation of gas for superior uses.

For natural gas is possessed of special qualities. It is particularly suitable for superior uses such as cooking, refrigeration, air conditioning, and water heating in homes and commercial establishments; in metallurgical processes for annealing and heat treating of metals where high temperature and close temperature control are required; in the chemical industry as a raw material from which many useful products are derived; and in other special advantage uses. It is truly a premium commodity. Yet each year increasingly greater quantities of natural gas are wastefully burned under industrial boilers and in large steam electric generating plants and in other inferior uses, as, for example, in the manufacture of cement. Invariably where gas is dumped into large industrial plants for inferior purposes or in electric generation stations in coal consuming areas, it results in the displacement of large quantities of coal.

Mr. Justice Jackson of the Supreme Court of the United States, in his supplemental opinion in a natural gas case before that body, eloquently described the problem of conservation and the necessity for avoidance of interruptible dump sales in this manner:





"The heart of this problem is the elusive, exhaustible, and irreplaceable nature of natural gas itself. Given sufficient money, we can produce any desired amount of railroad, bus, or steamship transportation, or communications facilities, or capacity for generation of electric energy, or for the manufacture of gas of a kind. In the service of such utilities one customer has little concern with the amount taken by another, one's waste will not deprive another, a volume of service can be created equal to demand, and today's demands will not exhaust or lessen capacity to serve tomorrow. But the wealth of Midas and the wit of man cannot produce or reproduce a natural gas field."

(BY MR. HALL)

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### CONCLUSION

It has been our purpose here to point out to your Commission the infirmities which we believe exist in the Natural Gas Act insofar as they relate to the conservation of natural gas through regulation. In summation, may we say that because the Federal Power Commission has not been specifically directed by the Congress to preserve natural gas by control of its end use or to affirmatively establish a national fuel policy, it has not adopted a firm, forthright conservation policy. The end result, as I said earlier in this statement, has been the extravagant waste of our natural gas resources to the point where the life index of our natural gas reserves has fallen each year for the last twelve years and has reached the danger point of 21.4 years' supply. You still have the golden opportunity to protect the useful life of your natural gas reserves and at the same time preserve a fair and balanced fuel economy in Canada.

Accordingly, we submit for your consideration suggested recommendations which are presently lacking in the Natural Gas Act in the United States. The Federal Power Commission is not now vested with the power over direct industrial sales of natural gas. Control over this type of sale, coupled with a specific directive to protect the public interest by adherence to sound principles of conservation, would go a long way towards establishing a sound fuel



policy. There should be a duty on the part of the regulatory body to (1) recognize that defense and economy measures require the maintenance of the productive and supply capacity of the several fuel industries, including coal, and (2) give effect to sound principles of conservation in the utilization of natural gas in order to preserve available reserves of this valuable fuel. In addition, that in any rate making formula special prohibitions against the sale of natural gas at a price less than its costs, including the cost of transportation and sale, plus a fair proportion of the fixed charges should be included. This latter position would serve to establish and preserve, at least in part, a competitive balance between natural gas and other competing fuels. All of which would be a step in the right direction towards the achievement of the necessary goal of a balanced fuel economy in your nation.

Not only will such built-in regulations prevent useless waste of time in interpretation and experimentation, but a sound over-all national fuels policy will be established for future generations. This opportunity for us has all but vanished -- your opportunity still knocks on the door of the future.

On behalf of my associates in this presentation, and the organizations for which we speak, I wish to again express appreciation to the Commission Chairman, Members, and Staff for affording us the opportunity to participate in these proceedings. It is hoped that this submission will serve some useful purpose in assisting your Commission in the formulation of its policy recommendations in the energy field. We will be glad to answer any questions you may have falling within the framework of our active experience under the Natural Gas Act and before the Federal Power Commission.

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